

Title (en)
THERMAL DISPLACEMENT ELEMENT AND RADIATION DETECTOR USING THE ELEMENT

Title (de)
THERMISCHES VERSCHIEBUNGSELEMENT UND STRAHLUNGSDETEKTOR, DER DIESES VERWENDET

Title (fr)
ELEMENT A DEPLACEMENT THERMIQUE ET RADIOMETRE L'UTILISANT

Publication
EP 1227307 A4 20040303 (EN)

Application
EP 01961319 A 20010903

Priority

- JP 0107608 W 20010903
- JP 2000268839 A 20000905
- JP 2001187945 A 20010621
- JP 2001234569 A 20010802

Abstract (en)
[origin: EP1227307A1] A thermal displacement element comprises a substrate, and a supported member supported on the substrate. The supported member includes first and second displacement portions, a heat separating portion exhibiting a high thermal resistance and a radiation absorbing portion receiving the radiation and converting it into heat. Each of the first and second displacement portions has at least two layers of different materials having different expansion coefficients and stacked on each other. The first displacement portion is mechanically continuous to the substrate without through the heat separating portion. The radiation absorbing portion and the second displacement portion are mechanically continuous to the substrate through the heat separating portion and the first displacement portion. The second displacement portion is thermally connected to the radiation absorbing portion. A radiation detecting device comprises a thermal displacement element and a displacement reading member fixed to the second displacement portion of the thermal displacement element and used for obtaining a predetermined change corresponding to a displacement in the second displacement portion. <IMAGE>

IPC 1-7
G01J 5/40

IPC 8 full level
B81B 3/00 (2006.01); **G01J 1/02** (2006.01); **G01J 5/40** (2006.01); **G01J 5/48** (2006.01); **H01L 27/148** (2006.01)

CPC (source: EP KR US)
B81B 3/0081 (2013.01 - EP US); **G01J 5/40** (2013.01 - EP KR US); **H01L 27/144** (2013.01 - KR); **H01L 27/14812** (2013.01 - EP US); **H01L 27/14818** (2013.01 - EP US); **H01L 27/14875** (2013.01 - EP US); **H04N 23/11** (2023.01 - KR); **B81B 2201/0278** (2013.01 - EP US); **B81B 2201/042** (2013.01 - EP US); **B81B 2203/0109** (2013.01 - EP US)

Citation (search report)

- [A] WO 0040938 A1 20000713 - SARNOFF CORP [US]
- See references of WO 0221086A1

Cited by
WO2023224955A1

Designated contracting state (EPC)
DE FR GB IT

DOCDB simple family (publication)
EP 1227307 A1 20020731; **EP 1227307 A4 20040303**; **EP 1227307 B1 20050727**; CN 1392951 A 20030122; DE 60112236 D1 20050901; DE 60112236 T2 20060413; JP 2003075259 A 20030312; JP 4945861 B2 20120606; KR 100780999 B1 20071129; KR 20020060723 A 20020718; US 2002153486 A1 20021024; US 6835932 B2 20041228; WO 0221086 A1 20020314

DOCDB simple family (application)
EP 01961319 A 20010903; CN 01802962 A 20010903; DE 60112236 T 20010903; JP 0107608 W 20010903; JP 2001234569 A 20010802; KR 20027005568 A 20020430; US 12933802 A 20020503